2021 WETLANDS PROGRAM PLAN FOR NEW MEXICO

(EPA Approved 8.16.2021)

Since 2003, the New Mexico Environment Department Surface Water Quality Bureau (SWQB) Wetlands Program and its partners have made substantial progress in the development of a robust program that focuses on measures that will restore and protect New Mexico wetlands. This updated Wetlands Program Plan describes the achievements made since this Plan was approved in 2010 by EPA and previously updated in 2012, 2015, 2017 and 2019. It also lays out a pathway to continue program development for the next five years. This current version of the Wetlands Program Plan for New Mexico incorporates revisions described in the March 2020 Revised Draft of the ESTP Core Elements Framework. Through this updated 5-year Wetlands Program Plan we hope to continue progress towards a comprehensive and sustainable Wetlands Program for New Mexico.

WETLANDS PROGRAM GOALS

The Mission of the SWQB Wetlands Program is to protect, restore and increase self-sustaining and naturally functioning wetlands and riparian areas. The Wetlands Program emphasizes the role of wetlands in preventing and reducing water quality impairments and providing habitat and life requirements for wildlife. To this end the Wetlands Program has formulated the following long-term objectives:

1. Promote wetland protection and restoration as a goal of established watershed groups and other partnerships.

2. Increase wetland area (no net loss) as well as restore wetland functions and ecological services and develop a system for tracking gains and losses by wetland type.

3. Assist communities, agencies, tribes, stakeholders, local governments and others with wetlands technical information, project design and planning, training and other guidance.

4. Develop protection, adaptation and mitigation strategies for wetland resources threatened by the effects of a drying climate in the west, including drying of wetlands in the landscape, loss of mountain snowpack, increased large-scale catastrophic fires and subsequent flooding, scour and sediment delivery.

5. Develop and refine narrative water quality standards for wetlands and for specific wetland types and use these standards to promote more effective CWA §401 Certification.

6. Develop a toolbox of successful restoration techniques that are specific to wetland types and ecoregions.

PARTNERSHIP GOALS

The principal goal which informs the work of the SWQB Wetlands Program and its many public and private partners is a desire to restore and maintain wetlands, allowing them to fully function as natural systems. This goal can be accomplished through collaborative partnerships that contribute to completing large-scale major restoration projects, and to restoring numerous wetlands within a watershed an acre at a time.

A second overarching goal is to create a sustainable wetlands plan of action by developing sustainable funding sources. SWQB Wetlands Program and its partners are considering ways to achieve sustainability through potential funding, programs, and management activities such as wetlands banks, in lieu fee programs, state-sponsored programs such as the River Stewardship Program, participation in NGO-sponsored programs such as the Rio Grande Water Fund, through partnerships associated with the New Mexico Mapping Consortium, Geospatial Advisory Committee, and our Northern and Southern Wetlands Roundtables, by continuing to obtain matching grants through foundations, by organizing and assisting voluntary programs, and by obtaining in-kind resources and assistance through the efforts of watershed groups, NGOs and their volunteers.

The priority technical goals within the next five years are to identify and maintain simple, effective and efficient methods for monitoring wetlands, to work with our partners towards a complete inventory and baseline assessment of New Mexico's wetland resources, and to share these data for the benefit of wetlands.

Partnerships can aid in the protection of wetlands on the regional and local level. SWQB Wetlands Program can assist partners in the implementation of wetlands protection on the regional and local level by providing information, training and data that supports local efforts to protect wetlands.

SWQB WETLANDS PROGRAM EFFORTS

Currently SWQB Wetlands Program development is primarily supported by EPA Wetlands Program Development Grants competitively awarded by EPA Region 6 under the CWA §104(b)(3). The State of New Mexico provides a portion of funding for Wetlands Program staff through the Corrective Action Fund Program. The SWQB Wetlands Program and its core elements are

included in the comprehensive update to the Water Quality Management Plan (WQMP) and Continuing Planning Process (CPP) which was approved by the New Mexico Water Quality Control Commission and EPA Region 6 in October 2020 https://www.env.nm.gov/surface-water-quality/wqmp-cpp/.

In 2003, the SWQB Wetlands Program began the development of a wetland restoration program (Wetlands Action Plan Program), which is part of a larger mission to improve and protect the state's watersheds and water quality. Through the CWA §319(h) Nonpoint Source Management Program (NPS), SWQB provides funding for watershed groups to develop Watershed Based Plans to reduce pollutants in their watersheds. The Wetlands Action Plan Program provides an opportunity and support for these established watershed groups to broaden their planning and resource improvement efforts to include wetlands, riparian and buffer areas within their watersheds. To this end, the SWQB Wetlands Program is incorporated into the NPS Management Plan for New Mexico, and implementation activities and projects are eligible to compete for funding under CWA Section 319 so long as those activities/projects meet the established watershed management and water quality protection objectives of CWA Section 319 and are described in a completed Wetlands Action Plan.

The State has incorporated wetlands monitoring and assessment into SWQB's Water Quality Monitoring and Assessment Program and wetlands assessment into the 10-year Monitoring Strategy. Wetlands monitoring and assessment contributes to progress toward meeting two overarching national goals of "No Net Loss" in wetlands extent and an "Overall Increase" in wetlands extent, functions, and quality. Effective wetland monitoring and assessment enables New Mexico to meet federal Clean Water Act requirements under Section 305(b) to assess the condition of all navigable waters, including wetlands. The SWQB Wetlands Program has focused its efforts on establishing wetlands assessment and monitoring that can be implemented with the assistance of its many partners. The assessment and monitoring goals of the SWQB Wetlands Program include:

- Continue to expand an inventory and classification of wetlands resources statewide;
- Develop and utilize assessment protocols to verify wetland condition, degradation, impacts and the causes of stress, and recovery;
- Document wetland gains and losses;
- Identify vulnerable wetland types, develop strategies to anticipate potential sources of stress and to create/maintain resilience of these wetland/riparian systems confronted by the effects of a drying climate;
- Document results of wetland restoration projects and innovative techniques for restoration;
- Assess wetland resources to determine potential strategies for recovery of wildlife habitat and wildlife corridors;

- Use information generated by wetlands assessment to prioritize wetlands projects and protection within specific watersheds or regions;
- Use information generated by wetlands assessment to assist the United States Department of the Army Corps of Engineers (USACE) in developing meaningful Before-After Mitigation Impact (BAMI) documentation of wetland compensatory mitigation and to use these data to establish mitigation credits and ratios;
- Identify ecologically important and high-quality wetlands through wetlands mapping and assessment for future Outstanding National Resource Waters (ONRW) nomination and protection;
- Monitor ONRW wetlands to identify pollution and degradation, and to use these data to ensure that degradation is prevented, and sources of pollution are abated;
- Assist partners and programs in using SWQB Wetlands assessment tools and generating data to protect and restore wetlands.

The State's regulatory program applies to all surface waters of the State including wetlands. These regulations provide for certification of CWA §402 NPDES permits, and CWA §404 dredge and fill permits under CWA §401, establishing water quality standards under CWA §303 (c) and reporting under CWA §§303(d) and 305(b). The Wetlands Program is currently working with the USACE, Albuquerque District to complete and adopt a regulatory module of the New Mexico Rapid Assessment Method (NMRAM) to assist and improve evaluation of compensatory mitigation through the BAMI procedures. Overall, New Mexico is making progress towards establishing a baseline for wetlands in the state to provide a picture of wetland types and condition. A rapid assessment protocol for the State's wetland resources is under development and use, which focuses on vulnerable and threatened wetland types. The protocol will be used consistently by the SWQB Wetlands Program and participating partners. Mapping and classifying wetlands in the state is progressing through partnerships and projects by SWQB Wetlands Program and others, and numerous demonstration restoration efforts using innovative techniques are in progress or in place.

New Mexico's wetlands including isolated wetlands are incorporated within the water quality standards definitions and are considered "surface waters of the State" (20.6.4.7 NMAC). Isolated and ephemeral wetlands (such as playas) are included in the definition. The interests of the state are critically linked both economically, ecologically and culturally to good water quality in all of the state's waters including isolated wetlands. Non-perennial waters make up over 80% of the state's waters and are expressly protected by the State's standards. Currently, the SWQB Wetlands Program is working to protect and restore vulnerable isolated wetlands, and development of water quality standards specific to wetland types including isolated and ephemeral wetlands is ongoing.

The SWQB nominated and the Water Quality Control Commission (WQCC) adopted all naturally occurring wetlands within US Forest Service Wilderness Areas in New Mexico as Outstanding National Resource Waters (ONRW) in 2009. Although wetlands have been included in previous ONRW nominations in the Valle Vidal and the Rio Santa Barbara areas, this action was New Mexico's first success in applying Best Management Practices and improved anti-degradation policy to ONRW wetlands. The SWQB Wetlands Program will continue to identify ecologically important wetlands in other parts of the State. Updating and expanding a directory of Reference Standard Wetlands (best condition), and wetlands in ecologically important or threatened areas to which ONRW status or other protective measures should apply will help aid in these efforts.

WETLANDS PROGRAM PROGRESS

In 2020, the Covid-19 pandemic has caused a snow-ball effect that delayed our well-developed plans. NMED staff travel was restricted in 2020 by order of the New Mexico Governor, so that field work was pushed back to Spring 2021. Our COVID-safe field practices now allow us to work with multiple safety measures, and as we ramp up for field work, we are dealing with competition for field vehicles, over-booked contractor schedules, and weather issues. NMED employees and most state employees have been teleworking since March 16, 2020. However, the SWQB Wetlands Program has still made significant achievements in the last two years and has made some positive and productive changes from lessons learned during the pandemic.

Since the Wetlands Program Plan was developed in 2010 and subsequently updated in 2012, 2015 2017, and 2019 progress has been made on activities that expand the capacity of the Wetlands Program. Below is a list that highlights some of these accomplishments.

- Since 2015, the Wetlands Program has expanded its New Mexico Wetlands Roundtable to include a Southern Wetlands Roundtable that is exclusively geared towards southern New Mexico issues and needs. Both the New Mexico Northern and Southern Wetlands Roundtables meet semiannually. Before pandemic safety precautions were implemented in March 2020, the Southern Wetlands Roundtable was conducted in the southern part of New Mexico in Las Cruces to include those partners more proactively and to address wetlands issues unique to the more arid conditions of southern New Mexico. The Northern Wetlands Roundtable was conducted in the northern part of the New Mexico principally in Santa Fe. Both the Southern and Northern Wetland Roundtables include agency, tribal and NGO participants, as well as students, watershed group members, and others interested in New Mexico wetlands. In March 2020, the scheduled in-person Southern and Northern Wetlands Roundtables were cancelled and subsequently conducted as virtual meetings using WEBEX. This change was remarkably successful in attracting participants that cannot travel to Wetlands Roundtable meetings, including out-of-state presenters and attendees. The Roundtables will continue as hybrid of in-person and webinar-based meetings in the

future to engage as many partners as possible in wetlands and water resources issues, information sharing, technical transfer and resource protection.

- Mapping and classification of wetlands within nearly 20 million acres in the Canadian River basin and Dry Cimarron watersheds, Jemez Mountains and the Upper Rio Grande and adjacent areas, in the Sacramento Mountains and adjacent areas, and all wetlands on USFS Wilderness Areas is complete and included in the National Wetlands Inventory (NWI) database and on-line mapper. Mapping of wetlands in the Middle Rio Grande and surrounding areas in the mid-eastern portion of the state, in the Gila Region, in the Lower Rio Grande, in northwestern New Mexico surrounding the San Juan-Animas watersheds and the Estancia Basin, in the bootheel region in southwestern New Mexico and the eastern plains are currently in progress. In addition to polygonal and linear wetland feature mapping, the landscape position, landform, water body type, water flow path classification and descriptors (LLWW) are being applied to all wetlands mapped, and wetland functions are being identified and ranked. The wetlands are also being classified according to the Hydrogeomorphic (HGM) classification in order to prepare for NMRAM data collection and to identify classified segments for wetlands narrative water quality standards. In early 2020, the NWI began requiring any new mapping submitted to the NWI database to conform to new standards (NWI Version 2.0). The current ongoing mapping projects and the completed Sacramento Mountains project are all undergoing updates to conform to the new standards for inclusion in NWI. Participation in the New Mexico Geospatial Advisory Committee and the New Mexico Wetlands Roundtables assists in coordination of wetlands mapping throughout the State. Sixteen Map Book PDFs and instructions for making additional map books were created for use by watershed groups and others. These map books succinctly show map overlays of the different wetland classifications and wetland functions in a given area and are usable by those without GIS capability. The first SWQB Wetlands Program on-line Story Map (ESRI) for the Sacramento Mountains area is complete and can be found at: Sacramento Story Map and a Story Map for the entire state is in progress.

- The New Mexico Rapid Assessment Method (NMRAM) provides procedures, rationale and the metric measurement protocols for conducting a rapid assessment of wetlands. The assessment is a multi-step process including delineating a target Wetland of Interest and one or more Sampling Areas to be assessed. For each Sampling Area, metrics grouped into three attribute categories, Landscape Context, Biotic, and Abiotic are measured and rated. Landscape Context metrics are assessed using maps and/or a geographic information system (GIS) and preferably completed before going into the field to help familiarize the team with the site. The Biotic and Abiotic attributes are evaluated in the field along with a set of field-based stressor checklists and documentary photographs. Worksheets are provided to guide the taking and recording of data.

The worksheets together with maps and photographs make up the *NMRAM Assessment Package* that becomes the supporting record of a project. The NMRAM is designed so that scores of individual metrics can be considered together, weighted, and rolled up into a single rank score representing the overall condition and function of a Wetland of Interest.

The Wetlands Program has completed the development of current versions of NMRAM for Montane Riverine Wetlands (Version 2.4), Lowland Riverine Wetlands (Version 2.3), Playa Wetlands (Version 1.2), and Springs Ecosystems (Version 1.0). The Field Guides and data collection worksheets are available at https://www.env.nm.gov/surface-water-quality/wetlands-rapid-assessment-methods/.

- The Montane Riverine Wetlands NMRAM was initially developed for montane riverine wetlands in the Upper Rio Grande watershed. SWQB Wetlands Program and its partners updated and validated the method for montane riverine wetlands in the Gila and Mimbres watersheds, and the Canadian and Dry Cimarron watershed for Montane Riverine Wetlands Version 2.4.
- The development of NMRAM Lowland Riverine Wetlands Version 1.1 was completed on the Gila and Mimbres watersheds – watersheds that are considered relatively intact. The Wetlands Program and its partners updated versions from data analyses in the Rio Grande and Lower Pecos, lowland riverine systems that have considerable alteration, for Lowland Riverine Wetlands Version 2.3. The Wetlands Program will further refine lowland riverine methods in the San Juan/Animas watersheds in the northwestern part of New Mexico to increase the reference domain for its use and to test its efficacy for supporting water quality standards development for lowland riverine wetlands.
- Development of NMRAM for Springs Ecosystems Version 1.0 in southwestern New Mexico is complete. Further refinement and utility of NMRAM for Spring Ecosystems in other reference domains in New Mexico is a future goal of the Wetlands Program.
- The Playa Wetlands NMRAM was developed for the thousands of playas of the Southern High Plains in eastern New Mexico. Through the Wetlands Program mapping efforts, depressional wetlands termed “playas” span the entire state but have a variety of unique hydrologic and hydrogeomorphic attributes as well as distinctive vegetation and other attributes. A future goal of the wetlands Program is to characterize New Mexico depressional wetlands and mineral flats so that NMRAM can be accurately applied.
- NMRAM development for confined valley riverine wetlands, and for headwater slope wetlands are in progress.
- A Version of NMRAM for Riverine Wetlands for Regulatory use (Version 1.3) by the Corps of Engineers and the regulated public is complete and will undergo final approval for use by the Corps of Engineers. The NMRAM Riverine Wetlands Regulatory Version 1.3 is still applicable and essential under the newest Waters of the US (WOTUS) rules.

The Wetlands Program engages partners with expertise and local knowledge in development and refinement of these NMRAM versions through the assistance of an advisory committee for each subclass of NMRAM. Future versions of NMRAM will include episodic riverine wetlands, more subclasses of springs and other high-altitude and slope wetland types, as well as depressional and mineral flat wetlands.

A Statewide database for NMRAM data is currently being prepared for integration with other water quality databases (Surface Water Quality Information Database) (SQUID)) at NMED and is nearly ready for data input and on-line access for montane riverine wetlands, lowland riverine wetlands, confined valley riverine wetlands and playas NMRAM data. Electronic data collection worksheets have been developed for NMRAM, and development of Sampling Area reports is underway. The SWQB Wetlands Program is also developing SOPs for data entry into SQUID that describes the Verification and Validation process completed for data entry by SWQB.

- Wetlands perform ecological functions that help improve and maintain environmental quality. Healthy natural wetland ecosystems typically provide functions most effectively in terms of cost and performance. Twelve wetland ecological functions (WEFs) were identified as most pertinent for New Mexico. The NMRAM focuses on evaluating wetland condition as a measure of ecological integrity and, by inference, the natural functional capacity of wetlands. A cross walk between NMRAM metrics and WEFs was developed in 2019 including the rationale behind each metric and how it applies to the designated functions. The goal is to provide the relationship for using NMRAM to help develop wetlands standards aimed at minimizing loss and protecting wetlands acreage, quality, and function for the different subclasses of wetlands in New Mexico.

- A Wetlands Vegetation Index of Biotic Integrity (VIBI) for montane riverine wetlands was completed in 2013. The results of this project demonstrate the use of detailed vegetation data to assess the ecological condition of Montane Riverine wetlands. Wetland restoration and management can then be improved to prevent disturbance and provide protection to suites of plants known to correlate with the lowest levels of human disturbance (reference sites). In turn, the VIBI can also be used to improve management of wetlands based on vegetation attributes and habitat characteristics. VIBI is another important tool that improves the State's ability to protect, manage, and restore its wetlands resources.

- Our 10-year Strategy for Wetlands Assessment and Monitoring was completed in 2012, incorporated into the Monitoring and Assessment Strategy for New Mexico and is available at SWQB. The SWQB Wetlands Program is currently updating and refining this Strategy for the next ten years as part of the current five-year program commitment.

- Eighteen Wetlands Action Plans have been completed since the program started in 2003 and three new WAPS are underway. They are currently available on the SWQB Wetlands Program website at https://www.env.nm.gov/surface-water-quality/wap/ . They can also be accessed along with other watershed-based plans at https://www.env.nm.gov/surface-water-quality/wbp/ . The most current Wetlands Action Plan, "Arid-Land Spring Cienegas of New Mexico" describes a strategy for locating, restoring and protecting arid-land spring cienegas, important unique groundwater-supported wetlands that provide habitats for rare and unique plants and aquatic animals and are essential sources of water and pasture in arid regions throughout New Mexico.

- Progress toward implementing WAPs in priority watersheds is reported in the NPS Annual Report to EPA. In 2020, the NMED SWQB Watershed Protection Section incorporated WAPs into the Solicitation for Applications for Watershed Project Implementation. Applicants were allowed to apply for funding under watershed-based plans as well as completed Wetland Action Plans found at https://www.env.nm.gov/surface-water-quality/wap to implement activities and projects identified in the current WAP as well as update existing WAPs.

- One more Wetlands Demonstration Restoration Project was completed by SWQB Wetlands Program since 2019. "Keyline Design for Restoration of Headwater Slope Wetlands in the Holman Creek Wetlands Complex" demonstrated the application of Keyline Design principles to slope wetlands in a headwater ecosystem. These types of wetlands have precipitation-driven and groundwater-driven hydrologic characteristics. These wetlands are also important sinks for atmospheric carbon. Careful planning and integrated restoration techniques are highlighted using Keyline Design principles, and monitoring groundwater-supported wetlands is still ongoing at the project site. Other projects around the state are reported by our partners at the New Mexico Wetlands Roundtables and special projects by our partners are featured as the "NGO Spotlight". Thus far, New Mexico Wetlands Program has completed 10 Wetlands Demonstration Restoration Projects improving and expanding the State's wetlands restoration techniques toolbox that is shared and used statewide and nationally. Details of these projects can be found at https://www.env.nm.gov/surface-water-quality/wetlands-projects/ .

- Five Technical Guides are completed. The newest Technical Guide, "Applying Keyline Design Principles to Slope Wetland Restoration in a Headwater Ecosystem," is available from the SWQB Wetlands Program. Other Technical Guides include 1)

"Exploring Springs and Wetlands and their Relationship with Surface Flows, Geology, and Groundwater in the La Cienega Area, Santa Fe County, New Mexico" 2) "New Mexico Wetlands Technical Guide: Wetland Functions"; 3) "Characterization and Restoration of Slope Wetlands in New Mexico"; 4) "The Plug and Pond Treatment: Restoring Sheet Flow to High Elevation Slope Wetlands in New Mexico," are also available in hard copy from SWQB and at New Mexico Environment Department Surface Water Quality. In addition, a landowner's guide, "Healthy Streamside Wetlands, A Guide to Good Stewardship for Southwestern Bosque and Riparian Wetlands," is available at New Mexico Environment Department Surface Water Quality and in hard copy from SWQB.

- In addition to our Wetlands Roundtables, the Wetlands Program provides workshops and training sessions to our partners and others. These workshops and trainings engage and inform partners, enhance partners capacity to proactively monitor and restore wetlands, influence stakeholders to be more involved in wetland issues, and increase the role and capacity of the Wetlands Program. In 2020 annual NMRAM trainings available to watershed groups, agencies, contractors, tribes and others were postponed due to Covid restrictions but are expected to resume in summer 2021. As a supplement to the NMRAM trainings, Botany Booster trainings are held to improve the technical expertise of participants to collect biotic data and will also resume in 2021. The Keyline Design Project was highlighted in a half day conference workshop by the Quivira Coalition in November 2019. The Wetlands Program staff also participated in the 2021 ASWM-sponsored Annual State/Tribal/Federal Coordination Virtual Meeting serving on a panel for sharing wetland mapping for a variety of uses. Weekend restoration workshops at the East Fork of the Jemez River on the Valles Caldera National Preserve are also planned to resume in 2021. Participants at the workshops learn about and implement innovative wetlands restoration techniques. These techniques included building innovative restoration structures of natural and on-site materials that re-direct flow, spread water, arrest erosion, raise the water table in wetlands, and attract beaver and other wildlife, as well as constructing barriers in strategic locations to protect sensitive wetlands from livestock and wildlife grazing.

  The SWQB Wetlands Program conducted a three-day "Wetlands Across Borders, Playas of the Southern High Plains" workshop in Clovis, New Mexico in late 2017. The meeting consisted of one and one-half days of presentations and panel discussions about playa ecology, conservation, restoration and other important topics about playas. The meeting was followed by three track options – New Mexico Rapid Assessment Method Training for Playa Wetlands, a Playas and Roads workshop, or a half-day field trip to look at local playas. The meeting was advertised to over 1600 potential participants through the local SWCDs and through contacts in Texas, Colorado and Oklahoma since those states have Southern High Plains playas and their communities are facing similar critical water issues.

Two two-and-a-half day workshops targeting tribal, NMDOT, other agency and county roads staff in the playa region of the Southern High Plains and the San Juan region in northwestern New Mexico were conducted in 2017 and 2018 to provide the principals of geomorphology and natural channel design to roads construction and maintenance. The workshops updated the participants on new techniques, best management practices and construction specifications for successful playa, stream and riparian restoration integrated with road design and maintenance techniques. The workshops demonstrated that highway construction projects have the potential to not only "do no harm" but even to improve the health of the waterbody or watercourse, introducing a new paradigm of road design and maintenance. The SWQB Wetlands Program will continue to demonstrate new techniques for restoring playas and playa clusters as the focus of partner planning restoration and monitoring efforts.

A workshop to organize the first "All Hands" monitoring effort was conducted and on-site monitoring with volunteer groups was initiated only to be postponed by Covid restrictions in 2020. Currently "All Hands Phase 2" is being planned and promoted and will use virtual training modules to supplement on-the-ground training techniques and certification of participants to use NMRAM. "Restoration Crew Leader" training was completed in 2019 providing trainees the skills to manage restoration teams and complete restoration in a safe and efficient manner. These efforts will increase participation by agencies and volunteers in restoration and data collection for wetlands.

- Review of our current Water Quality Standards to identify ways to improve and update regulations to be more applicable to wetlands and wetland subclasses is underway. Completing a review of other State's wetland regulations and participating with the Association of State Wetland Managers (ASWM) in a wetlands water quality standards project has augmented this effort. In 2016, the Wetlands Program participated in the Association of Clean Water Administrators (ACWA) development of templates for wetlands narrative water quality standards and provided a webinar on how New Mexico is using those templates and the steps taken to develop meaningful and defensible narrative wetlands water quality standards.

  The Wetlands Program has developed a nine-step process for the development of wetlands water quality standards for New Mexico.

  1. Mapping and classification update
  2. Identifying wetland functions by wetland type (designated uses)

3. Hydrogeomorphic classification applied to mapped wetlands
4. Measuring the condition of wetlands by wetland type
5. Identifying stressors that affect wetland condition (impairments)
6. Database development
7. Unique identifiers for each wetland (Assessment Units)
8. Using these data to develop a defensible narrative standard by wetlands type
9. Plan for outreach to the public regarding the development and uses of wetland water quality standards.

A draft white paper describing water quality standards for Playas of the Southern High Plains in New Mexico is under development and review and incorporates the template for wetlands narrative water quality standards. Since the 2001 Supreme Court decision known as SWANCC (Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, 531 U.S. 159), playas are not jurisdictional waters under the federal Clean Water Act. Even with the current state standards, the New Mexico Environment Department would currently not be able to enforce any permit conditions in the absence of a state surface water quality permitting system. However, the development of the standard paves the way for future protection of playas as the principal natural source of surface water and groundwater recharge on the Southern High Plains of New Mexico.

The SWQB Wetlands Program will develop wetlands water quality standards for other subclasses of wetlands including Montane Riverine Wetlands and Headwater Slope Wetlands as well as other isolated wetland types in need of state protection. The Wetlands Program will use data generated through assessment and monitoring to evaluate stressor load reductions that will improve wetland condition (Total maximum levels of stress (TMLS). The goal is to develop and refine narrative water quality standards for wetlands to be more applicable to and protective of subclasses of wetlands in New Mexico.

OVERVIEW OF FIVE-YEAR GOALS AND OBJECTIVES

To effectively develop basic program functions that form the foundation of wetlands management and protection, the following outlines core elements, actions and activities to protect and restore New Mexico's wetlands over the next five-year period. The completion of these activities is dependent on financial, staffing and other resources available to the Wetlands Program and its partners.

Program Development Activities for BUILDING AND MAINTAINING PARTNERSHIPS

Overall Objective: The SWQB Wetlands Program relies on a substantial number of partners to implement the work on the ground. A core function of the five-year plan is to continue building and maintaining partnerships to implement the Wetlands Program Plan, and to train and inform partners at all levels.

Action: Continue to build and maintain partnerships							
Activity	**2021**	**2022**	**2023**	**2024**	**2025**	**Partners**	**Activity Lead**
Maintain and expand participation in State Wetlands Roundtables (presently in its 15th year) composed of governmental, NGO, watershed group and tribal partners to address challenges to New Mexico's wetlands resources. Update and refine Roundtables' venues to include hybrid in-person and virtual meetings.	x	x	x	x	x	State, federal, NGO, watershed group and tribal government partners on Roundtable	SWQB Wetlands Program
Maintain the Northern Wetlands Roundtable meetings to discuss resources for developing and maintaining initiatives, and addressing challenges to monitoring, restoring and protecting New Mexico's wetlands.	x	x	x	x	X	Governmental, tribal, NGO partners on Northern Roundtable	SWQB Wetlands Program, NGO co-sponsorship
Maintain the Southern Wetlands Roundtable to discuss regulations, restoration, monitoring, challenges and partnerships unique to the southern part of the state.	x	x	x	x	x	Governmental, tribal and NGO partners on Southern Roundtable	SWQB Wetlands Program, NGO co-sponsorship
Work with Roundtables to ensure cooperation to achieve Wetlands Program Plan goals. Develop annual actions and dialogue to further the goals of this Plan.	x	x	x	x	x	Wetlands Roundtables	SWQB Wetlands Program

Continue to identify and participate in public/private partnerships such as the Rio Grande Water Fund with the goal of generating sustainable funding for restoration, protection, education, research and policy.	x	x	x	x	x	Foundations, private businesses, water utilities, tribal, federal, state and private partners	The Nature Conservancy, NMED signatory
Action: **Identify and maintain simple, effective and efficient methods for monitoring wetlands through partnerships**							
Activity	**2021**	**2022**	**2023**	**2024**	**2025**	**Partners**	**Activity Lead**
Identify long-term sustainable wetlands monitoring strategy for watershed wetlands that can be maintained by local government, citizen science or watershed groups.	x	x	x			Local governments and Watershed Groups, Roundtables	Roundtables, WAP-participating Watershed Groups
Work collectively with all partners towards a long-term solution to wetlands monitoring, particularly the funding of long-term monitoring.	x	x	x	x	x	Roundtables	Northern and Southern Roundtables
Create a toolbox of wetlands monitoring metrics and protocols for partners to determine restoration success and adaptive management that can be scalable to support both large-scale and small-scale projects.		x	x	x	x	Roundtables, Project Contractors, Watershed Groups	SWQB Wetlands Program, Watershed Groups
Engage group participation through a demonstration "All Hands Phase 2" monitoring effort to collect NMRAM data. Continue effort each year at select sites.	x	x	x	x		Agencies, NGOs, trained technicians	SWQB Wetlands Program
Develop tools (i.e., story maps, map books, field guides, virtual training modules, mobile apps) to teach and disseminate wetlands assessment and mapping products to partners, watershed groups and local governments.	x	x	x	x	x	Local governments and Watershed Groups, Roundtables	SWQB Wetlands Program

Action: Identify opportunities to create sustainable ways to fund and accomplish wetlands restoration and protection work.							
Activity	**2021**	**2022**	**2023**	**2024**	**2025**	**Partners**	**Activity Lead**
Investigate the feasibility of creating a "short term funding source" that will support funding of small-scale restoration projects. This source could make funds available up front to landowners who receive grants as reimbursement for expense incurred.	x	x	x	x	x	Roundtables, Foundations, Banks, State Revolving Fund (SRF), River Stewardship Program	SWQB Wetlands Program, Roundtables
Create Strategy to coordinate and leverage multiple funding sources. Encourage partners to work towards a large-scale project with a large impact supported by numerous funding sources, such as accomplished in the Bitter Lakes area. eg. Middle Rio Grande - Inter-Mountain West Joint Venture, Rio Grande Water Fund	x	x	x	x	x	Northern and Southern Roundtable participants	Agencies and NGOs at Roundtables

Program Development Activities for MONITORING AND ASSESSMENT Core Element

Overall Objective: Develop a full and complete wetlands assessment and monitoring strategy consistent with *Elements of a State Water Quality Monitoring and Assessment Program for Wetlands* (EPA, 2006) that the State can use to inform management decisions and achieve goals that protect and restore wetlands resources.

Action: Continue to develop Elements of a State Water Quality Monitoring and Assessment Strategy for Wetlands							
Activity	**2021**	**2022**	**2023**	**2024**	**2025**	**Partners**	**Activity Lead**
Continue to develop monitoring design and sample sites that best serve the State's assessment and wetland management objectives.	x	x	x	x	x	Roundtables, UNM Natural Heritage, State Agencies, EPA, federal land management agencies.	SWQB MASS and Wetlands Program
Participate in National Wetlands Monitoring and Assessment Work Group (NWMAWG) to stay abreast of new developments in wetland monitoring, assessment, and data analysis. Participate in 2021 NWCA.	x	x	x	x	x	NWMAWG, EPA	SWQB Wetlands Program
Update the State of New Mexico 2012 Wetlands Assessment and Monitoring Strategy.	x	x	x	x		SWQB Staff, Agencies and Roundtables	SWQB Wetlands Program
Action: Assess and monitor wetland resources by the development and use of Landscape, Rapid Assessment and Intensive Monitoring tools							
Activities	**2021**	**2022**	**2023**	**2024**	**2025**	**Partners**	**Activity Lead**
Participate in the State Mapping Consortium, Geospatial Advisory Committee, and National Wetlands Mapping Consortium, and on the NHD update representing wetlands until New Mexico has, at a minimum, National Wetlands Inventory coverage, classification and functional descriptors of all wetlands resources.	x	x	x	x	x	USFWS NWI, USFS, Geospatial Advisory Committee, Roundtables, Tribes, ASWM	SWQB Wetlands Program, Geospatial Advisory Committee

Complete mapping and classification of all non-tribal lands in New Mexico, including quadrangles in central New Mexico "checkerboard area" adjacent to Navajo Tribal lands, along the Rio Grande, and in southern and eastern New Mexico, including the bootheel area, and the Pecos mainstem until statewide coverage is complete. Ensure edge matching between project areas and checkerboard areas.	x	x	x	x	x	USFWS, SLO, ACOE, NMBGMR, Department Homeland Security, ASWM, USFS, BLM, USFWS, private stakeholders and counties	SWQB Wetlands Program, mapping contractors
Complete application of NWI 2.0 to all New Mexico mapped areas. Review and ensure all wetlands in USFS wilderness and roadless areas are updated. Complete mapping gaps analyses to ensure current mapping and application of wetland classifications are complete.	x	x	x	x	x	USFWS, SLO, NMBGMR, Department Homeland Security, ACOE, ASWM, USFS, BLM, USFWS, private stakeholders and counties	SWQB Wetlands Program, mapping contractors
Using mapping and classification products to identify depressional wetlands and mineral flats that are considered "playas" and describe and categorize these waterbodies into subclasses throughout New Mexico.	x	x	x	x		USFWS, SLO, NMBGMR, Department Homeland Security, ACOE, ASWM, USFS, BLM, USFWS, private stakeholders and counties	SWQB Wetlands Program

Assist in comprehensive vegetation mapping for wetlands and riparian areas statewide, collaborate with tribes and include new areas not mapped.	x	x	x	x	x	USFS, USFWS, BLM, NWI, UNM Natural Heritage, NMDGF, BOR Mapping Advisory Com.	SWQB Wetlands Program, NMDGF, UNM Natural Heritage
Continue to develop and promote the use of the New Mexico Rapid Assessment Method (NMRAM) for other wetlands subclasses through training and other venues. (Conduct one training per year) Organize one "all hands" data collection by trained partners each year. Conduct Botany Booster trainings as needed.	x	x	x	x	x	UNM Natural Heritage, ACOE, NMDOT, EPA, NMDGF, Tribes, Consultants, Watershed Groups, Others.	SWQB Wetlands Program
Revise and apply NMRAM to other wetland types and to other parts of the State. Continue to collect NMRAM data following the SWQB Water Quality Assessment Rotational Schedule at least every other year. Continue to revise NMRAM subclass modules as new data validates current NMRAM metrics and NMRAM analyses suggest the need for metric and scoring revisions. (See NMRAM development schedule below.)	x	x	x	x	x	SWQB Wetlands Program, UNM Natural Heritage, NMRAM Advisory Committees, consultants, others.	SWQB Wetlands Program
Test NMRAM to ensure that designated uses and proposed narrative standards for wetland subclasses are aligned to NMRAM condition rank scoring (Rank A (supporting), rank B (Supporting at Risk) and C or D (Non-Supporting).		x	x	x	x	UNM Natural Heritage	SWQB Wetlands Program
Update and expand database of reference standard wetlands using newly mapped wetland areas and classification as a basis for preliminary selection. Encourage volunteers and partners to assess reference standard wetlands using NMRAM.	x	x	x	x	x	UNM Natural Heritage and mapping contractors	SWQB Wetlands Program

Update the State's Quality Assurance Project Plan to include common wetland monitoring methods and protocols.	x	x	x	x		SWQB and EPA quality assurance officers	SWQB Wetlands Program
Develop a strategy and identify sample areas to sample repeatedly for wetlands status and trends.		x	x	x	x	UNM Natural Heritage Program	SWQB Wetlands Program
Develop monitoring methods and indicators of carbon sequestration and carbon and nitrogen exchange in response to wetland restoration.		x	x	x	x	UNM Natural Heritage, NMSU and other partners	SWQB Wetlands Program
Support NMRAM metrics and methods through level three data (e.g., Indicators of Ecological Integrity.)				x	x	UNM Natural Heritage	SWQB Wetlands Program
Action: Track Monitoring data in a system that is accessible, updated on a timely basis, and integrated with other water quality data							
Activity	**2021**	**2022**	**2023**	**2024**	**2025**	**Partners**	**Activity Lead**
Continue development of web-based database for wetlands coordinated with other SWQB databases (Surface Water Quality Information Database (SQUID)) and data. Share data with agencies and through statewide information portal.	x	x	x	x	x	NMED OIT, UNM Natural Heritage, NM Water Data Collaborative	SWQB Wetlands Program and NMED OIT
Develop a system for geo-referencing data and displaying data collection sites for reporting and analysis.	x	x	x	x	x	NMED OIT and geospatial staff	SWQB Wetlands Program and NMED OIT
Develop and implement verification and validation packet for transferring data to SWQB, so data can be used for assessment against WQS, enforcement of WQS under the NM Water Quality Act (74-6-10 NMSA), development of the Integrated List, TMDL development, or WQS amendments.	x	x	x			Watershed Groups, Consultants, volunteer teams collecting NMRAM data.	SWQB Wetlands Program and SWQB Standards Section, SWQB QA/QC Officer EPA QA Officer.

Program Development Activities for WETLANDS REGULATORY PROGRAM Core Element

Overall Objective: Promote the use of new and proven methods to protect and restore wetlands by regulated project proponents.

Action: Adopt procedures and strengthen processes that protect wetlands through regulatory measures							
Activity	**2021**	**2022**	**2023**	**2024**	**2025**	**Partners**	**Activity Lead**
Maintain and improve the State's wetlands resources through development of sufficient mitigation ratios when mitigation is the only option. Include "no net loss" of function.	x	x	x	x	x	USACE, BUR, NMDOT, regulated community	USACE
Improve regulatory programs like the certification of Dredge and Fill under CWA § 401 that provide mechanisms for regulation of wetlands activities. Work more closely with USACE to provide input from §§404/401 public interest reviews.	x	x	x	x	x	USACE	SWQB 401 Cert Program and SWQB Wetlands Program
Explore the feasibility, find sites and sponsors of In-Lieu Fee Programs, and Mitigation Banks	x	x	x	x	x	USACE, NMDOT, Roundtable, NGOs	USACE
Expand the activities and content reported for wetlands in the combined CWA §§303(d) and 305(b) report, and in the NPS Management Plan.	x	x	x			Agencies	SWQB staff, SWQB Wetlands Program
Develop and improve ordinances and jurisdiction that protect wetlands/riparian areas/ buffer at the local level, and that ensure that vulnerable and isolated wetlands are protected from impacts. Use WAPs to help accomplish this.	x	x	x	x	x	County governments, local governments, watershed groups with WAPs	SWQB Wetlands Program, Roundtables

Develop a tracking process to track wetlands gains and losses from a variety of activities that either impact or restore wetlands.			x	x	x	USACE, NRCS	SWQB Wetlands Program
Continue development, training and use of USACE NMRAM in BAMI procedures.	x	x	x	x	x	USACE, UNM Natural Heritage, regulated community	USACE, SWQB Wetlands Program
Contribute to CWA updates, revision, and initiatives that assures the CWA protects all wetlands.	x	x	x	x	x	ASWM, EPA, USACE, other states.	SWQB Wetlands Program

Program Development Activities for VOLUNTARY RESTORATION AND PROTECTION Core Element

Overall Objective: Meet the wetlands goals in the watershed restoration activities established in the State's Non-Point Source Management Plan.

Action: Expand and improve Wetlands Action Plan (WAP) Program							
Activity	**2021**	**2022**	**2023**	**2024**	**2025**	**Partners**	**Activity Lead**
Work with other agencies and organizations to coordinate wetlands restoration, activities and funding through development of WAPs. Incorporate potential mitigation sites into WAPs and include information on updating ordinances or other protection at the local level.	x	x	x	x	x	USFS, NMDGF, BOR, BLM, USACE, other agencies, Roundtables, SWQB WPS	SWQB Wetlands Program and Watershed Groups
Integrate WAPs and watershed-based plans intended to implement NPS TMDLs and incorporate wetlands objectives in NPS pollution abatement.	x	x	x	x	x	SWQB WPS, Watershed Groups	SWQB Wetlands Program
Develop and demonstrate innovative designs and techniques for restoring wetlands.	x	x	x	x	x	Consultants, NGOs, NMDGF, Roundtables, NRCS, restoration contractors.	SWQB Wetlands Program

Seek out, develop and demonstrate improved methods for protecting wetlands i.e., headwaters, slope, alluvial fans, high elevation wetlands, springs, cienegas, playas and depressional wetlands as high priority areas.			x	x	x	NGOs, BLM, USFS, SLO, NMDGF, USFWS, NRCS, landowners, watershed groups, local government.	SWQB Wetlands Program, Roundtables.
Research, develop and demonstrate re-establishment techniques and innovative designs for lentic wetlands around lakeshores, ponds and man-made tanks.			x	x	x	BLM, USFS, SLO, NRCS, NMDGF, USFWS, NGOs, Universities.	SWQB Wetlands Program,
Develop and demonstrate innovative designs and protocols for restoration of at-risk wetlands and aquatic resources with wetland dependent priority species. Improve resilience and protection of at-risk wetland resources from flooding, fire and drought.	x	x	x	x	x	Federal, state and local agencies, tribes, NMDGF, USFWS	SWQB Wetlands Program
Encourage WAP partners to locate and protect slope wetlands (seeps and springs) and depressional wetlands in their watersheds and include information in WAPs.			x	x	x	NGOs, Watershed groups.	SWQB Wetlands Program
Update and improve SWQB Wetlands Website to augment communication with WAP partners, provide technical transfer of restoration techniques and guidance, display new WAPs, create links, and update with relevant activities of Wetlands Program.	x	x	x	x	x	Watershed groups, agencies, stakeholders, project contractors.	SWQB Wetlands Program
Integrate mapping and classification products into existing and future WAPs. Encourage the use of NMRAM to assess the condition of wetlands identified in watershed based WAPs and regional WAPs and include NMRAM data in WAPs. Provide mapping, classification and NMRAM training at least once per year to partners creating WAPs.	x	x	x	x	x	Watershed groups, consultants, NGO and Agency Roundtables, Tribes	SWQB Wetlands Program, UNM Natural Heritage, mapping contractors

Action: Create strategies that build capacity on public lands in New Mexico							
Activity	**2021**	**2022**	**2023**	**2024**	**2025**	**Partners**	**Activity Lead**
Develop strategies that shape policy for land and water use on public lands to promote restoration of wetlands.	x	x	x	x	x	Agencies. NMDGF, EMNRD, USFS, BLM, BOR, SLO.	SWQB Wetlands Program
Promote the preservation of wildlife habitat, wildlife corridors, and keystone species habitat related to wetlands and consistent with the State Wildlife Action Plan.	x	x	x	x	x	Agencies, NM DGF, Local Governments	SWQB Wetlands Program
Develop demonstration projects that emphasize pro-active climate change resilience activities including restoration and protection of wetlands and riparian corridors on federal lands.			x	x	x	USFS, USFWS, NPS, BLM	SWQB Wetlands Program,
Encourage federal agencies to monitor and protect ONRW wetlands.	x	x	x	x	x	Government Agencies, Agency Roundtables	SWQB Wetlands Program
Action: Create strategies that build capacity at the local level							
Activity	**2021**	**2022**	**2023**	**2024**	**2025**	**Partners**	**Activity Lead**
Develop strategies for working with private landowners and develop incentives for private landowners through watershed groups to restore, protect wetlands. Target isolated wetlands (e.g., cienegas, playas, springs) on private lands.	x	x	x	x	x	NRCS, NGOs, Agencies, Consultants	Southern and Northern Roundtables, Watershed Groups
Create technical materials and disseminate information to private landowners, tribes and others on incentives, methods and trainings to restore and protect wetlands.	x	x	x	x	x	NRCS, NGOs, Agencies, Consultants, Tribes, Roundtables.	SWQB Wetlands Program

Continue to refine information that provides economic justification and other value, including cultural/traditional and aesthetic for restoring wetlands.	x	x	x			ASWM, Tribes, watershed groups and others	SWQB Wetlands Program
Develop avenues for outreach to different groups who could be involved in wetlands as part of Wetlands Roundtable, Quivira Coalition Conference workshops, or other venue. Conduct statewide and interstate wetlands workshops. Reach out to new partners, new opportunities, at new venues.		x	x	x		SWQB WPS, Quivira Coalition, Roundtables, irrigation districts, Prairie Partnerships, other states' groups, others.	SWQB Wetlands Program
Assist partners by building their volunteer labor base and creating match opportunities. Train volunteer crew leaders in restoration techniques so that more volunteers are accommodated and are more productive on-site.	x	x	x	x	x	NGOs, Agencies, watershed groups.	SWQB Wetlands Program
Assist partners in finding match opportunities by participating in development and organization of large-scale wetland restoration/protection projects.	x	x	x	x	x	Local Governments, IWJV, PLJV, TNC, NM Wildlife Federation, USFWS Partners for Wildlife, others.	SWQB Wetlands Program
Develop and use incentives for landowners, road agencies and others within and adjacent to depressional wetlands (e.g., playas) watersheds to improve watershed conditions that benefit landowners and wetland resources.	x	x	x	x		USFWS Partners for Fish and Wildlife, NGOs, County Roads, NMDOT, private landowners, municipalities.	SWQB Wetlands Program

Program Development Activities for WATER QUALITY STANDARDS FOR WETLANDS Core Element

Overall Objective: Prepare for the future adoption of water quality standards for specific wetland types and ensure that ONRW wetlands are appropriately protected.

Action: Develop water quality standards for wetlands							
Activity	**2021**	**2022**	**2023**	**2024**	**2025**	**Partners**	**Activity Lead**
Review wetlands data to identify criteria that define physical, chemical and biological condition that is expected in wetlands.	x	x	x	x	x	ASWM, ACWA, other states.	Wetlands Program, SWQB Standards Team, EPA
Assess results of NMRAM data and other current state resources, data and information to develop and substantiate draft wetlands narrative standards by subclass (montane riverine, lowland riverine, confined riverine and playas).	x	x	x	x	x	ASWM, SWQB Staff, NMDGF, EPA, UNM Natural Heritage, others.	SWQB Wetlands Program
Assign functions to all mapped wetland subclasses; and develop appropriate wetland specific designated uses for four wetland subclasses (montane riverine, lowland riverine, confined riverine and playas).	x	x	x	x	x	NMDGF, Playa Lakes Joint Venture, Roundtables, Watershed Groups, stakeholders, others.	SWQB Wetlands Program, SWQB Standards Team, EPA
Assign Water Quality Classified Segments to wetlands using wetland mapping and classification information as a basis.	x	x	x	x	x	Wetland mapping contractors, SWQB MASS.	Wetlands Program SWQB Standards Team, EPA

Draft narrative criteria that qualitatively describe the condition that must be achieved to support the designated uses. Use data from reference standard sites (best obtainable) for the montane riverine, lowland riverine, confined riverine and playas subclasses.	x	x	x	x	x	SWQB Staff, technical advisory committee, others.	Wetlands Program, SWQB Standards Team, EPA
Draft narrative water quality standards for wetlands for subclasses – montane riverine, lowland riverine, confined riverine and playas.	x	x	x	x	x	SWQB Staff, technical advisory committee, others.	Wetlands Program, SWQB Standards Team, EPA
Develop technical documents to support the narrative criteria that will be used in determining attainment of the standard.	x	x	x	x	x	SWQB Staff, technical advisory committee, others.	Wetlands Program, SWQB Standards Team, EPA
Scope venues and communities for Wetlands WQS outreach.		x	x	x	x	Watershed Groups, NGOs and Roundtable partners	SWQB Wetlands Program
Identify ecologically important and high-quality wetlands through wetlands mapping and assessment for future Outstanding National Resource Waters (ONRW) nomination and protection. Assist partners in developing ONRW nominations.	x	x	x	x	x	UNM Natural Heritage Program, Watershed Groups, NGOs and Roundtable partners	SWQB Wetlands Program, SWQB Standards Team
Action: Apply anti-degradation policies for ONRW wetlands							
Activity	**2021**	**2022**	**2023**	**2024**	**2025**	**Partners**	**Activity Lead**
Work with USFS liaison to NMED to continue to appropriately protect and maintain condition and functions of ONRW wetlands	x	x	x	x	x	SWQB Staff, USFS liaison to NMED	SWQB Wetlands Program

Review Anti-Degradation Implementation Policy to determine if additional language related to wetlands functions, condition and hydrologic regime is appropriate.			x	x	x	SWQB Staff	SWQB Standards Team and SWQB Wetlands Program

ACRONYMS

ACOE	Department of the Army Corps of Engineers
ACWA	Association of Clean Water Administrators
ASWM	Association of State Wetland Managers
BAMI	Before-After Mitigation Impact
BLM	Bureau of Land Management
BOR	Bureau of Reclamation
CPP	Continuing Planning Process
CWA	Clean Water Act
EPA	Environmental Protection Agency
HGM	Hydrogeomorphic
IWJV	Intermountain West Joint Venture
LLWW	Landscape position, landform, water body type, water source
MASS	Monitoring, Assessment and Standards Section
NGO	Non-Governmental Organization
NHD	National Hydrologic Dataset
NMAC	New Mexico Administrative Code
NMBGMR	New Mexico Bureau of Geology and Mineral Resources
NMDGF	New Mexico Department of Game and Fish
NMDOT	New Mexico Department of Transportation
NMED	New Mexico Environment Department
NMRAM	New Mexico Rapid Assessment Method
NMEMNRD	New Mexico Energy, Minerals and Natural Resources Department
NPDES	National Pollutant Discharge Elimination System

NPS	Nonpoint Source
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
NWMAWG	National Wetlands Monitoring and Assessment Work Group
OIT	Office of Information Technology
ONRW	Outstanding National Resource Waters
PLJV	Playa Lakes Joint Venture
SLO	New Mexico State Land Office
SQUID	Surface Water Quality Information Database
SRF	State Revolving Fund
SWQB	Surface Water Quality Bureau
TMDL	Total Maximum Daily Load
TNC	The Nature Conservancy
UNM	University of New Mexico
US	United States
USACE	United State Department of the Army Corps of Engineers
USFS	US Forest Service
USFWS	US Fish and Wildlife Service
USGS	US Geological survey
VIBI	Vegetation Index of Biotic Integrity
WAP	Wetlands Action Plan
WPP	Wetlands Program Plan
WPS	Watershed Protection Section
WQCC	Water Quality Control Commission
WQMP	Water Quality Management Plan
WQS	Water Quality Standards

This Diagram shows the progression of New Mexico Rapid Assessment Method (NMRAM)development by the SWQB Wetlands Program. The update dates in yellow are proposed updates to the current NMRAM Versions. Lowland Riverine Wetland NMRAM is proposed to be tested and updated for the San Juan/Animas watersheds in Northwestern New Mexico. The Playas NMRAM will be tested, and supplemental metrics added to ensure applicability to the Playas of the Southern High Plains narrative water quality standard currently under development. The Springs NMRAM will be updated and applied to spring ecosystems in other parts of New Mexico to expand the reference domain. The NMRAM subclasses in green are proposed modules for future development.

NMRAM MODULES BY WETLAND SUBCLASS

NMRAM Manual Updates

Survey data into database

Current	Montane Riverine Chapter 2014 Update 2021	Montane Riverine Field Guide 2.4	Montane Riverine Data Collection Worksheets Package 2.4	Montane Riverine Module Database	
	Lowland Riverine Chapter 2016 Update 2024	Lowland Riverine Field Guide 2.3 Update 2024	Lowland Riverine Data Collection Worksheets Package 2.3 Update 2024	Lowland Riverine Module Database	
	ACOE Reg-NMRAM Chapter 2017 Update 2021	ACOE Reg-NMRAM Field Guide 1.4	ACOE Reg-NMRAM Data Collection Worksheets Package 1.4	ACOE Database	
	Playas Chapter 2017 Update 2023	Playas Field Guide 1.2 Update 2023	Playas Data Collection Worksheets Package 1.2 Update 2023	Playas Module Database	
	Springs Chapter 2019 Update 2024	Springs Field Guide 1.0 Update 2024	Springs Data Collection Worksheets Package 1.0 Update 2024	Springs Module Database	
	Confined Valleys Riverine Chapter 2021	Confined Riverine (Canyon) Field Guide 1.3	Confined Riverine (Canyon) Data Collection Worksheets Package 1.3	Confined Riverine (Canyon) Module Database	
Future	Headwater Slope Chapter 2022	Headwater Slope Field Guide 1.0	Headwater Slope Data Collection Worksheets Package 1.0	Headwater Slope Module Database	
	Statewide Playas Chapter 2024	Statewide Playas Field Guide 1.0	Statewide Playas Data Collection Worksheets 1.0	Statewide Playas Module Database	
	Desert Mineral Flats (Discharge Playas) Chapter 2024	Desert Mineral Flats (Discharge Playas) Field Guide 1.0	Desert Mineral Flats (Discharge Playas) Data Collection Worksheets 1.0	Desert Mineral Flats (Discharge Playas) Module Database	
	Subalpine Riverine Chapter 2025	Subalpine Riverine Field Guide 1.0	Subalpine Riverine Data Collection Worksheets Package 1.0	Subalpine Riverine Module Database	
	Ephemeral Riverine and Alluvial Fan Chapter 2025	Ephemeral Riverine and Alluvial Fan Field Guide 1.0	Ephemeral Riverine & Alluvial Fan Data Collection Worksheets Package 1.0	Ephemeral Riverine and Alluvial Fan Module Database	

Spatial data

Tabular data

NMRAM Wetland Atlas Web-served Geodatabase

SQUID Database